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REMARKS/ARGUMENTS

In reply to the Office Action mailed June 6, 2005, Applicants respectfully request reconsideration and allowance. In the Office Action, the Examiner rejected claims 1-19 in the application for anticipation and obviousness. In reply, Applicants have amended claim 8. Claims 1-19 remain pending in the subject application.

Claims 8-15, 18 and 19 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,063,263 (the "Palmas patent"). Applicants have amended claim 8 to recite, "a cyclone in said reactor vessel, said cyclone having an inlet directly communicating with said outlet of said transport conduit, said cyclone communicating with a vapor outlet extending from said vessel and a dipleg extending downwardly from said cyclone." The Palmas patent does not disclose a cyclone having an inlet directly communicating with the outlet of the transport conduit or a dipleg extending downwardly from the cyclone as recited in claim 8. In the invention of claim 8, the transport conduit accelerates product vapors and catalyst upwardly to the cyclone to achieve earlier separation of catalyst from product vapors, thus avoiding unselective overcracking of the product vapors. Transport through the transfer conduit delivers catalyst and products to the cyclone faster than they otherwise would be delivered to the cyclone by just ascending through a reactor vessel with a relatively larger cross-sectional area. Applicants respectfully request reconsideration and allowance of claim 8 and at least for the same reasons claims 9-14 which depend from claim 8.

Claim 15 recites, "transporting said light hydrocarbon product vapor from said inlet through an outlet in said transport conduit directly to a cyclone." The Palmas patent does not disclose transporting hydrocarbon product through an outlet end of the transport conduit directly to a cyclone. After leaving the transport conduit 15', the product and catalyst have to swirl through disengaging arms 29' through outlet 30' down and up through a restricted opening 41 in the shroud 40 to exit the reactor vessel 10 through outlet 31'. Even if cyclones located outside of the reactor vessel 10 were directly attached to outlet 31', no direct transport from the outlet of the transport conduit to a cyclone would exist. Whereas the subject application discloses a direct conduit 48 which transfers vapor product and entrained catalyst from an outlet 46 in the transport conduit into an inlet 49 of the cyclone 20. Applicants respectfully request reconsideration and withdrawal of the rejection for anticipation of claim 15. For at least the same reasons, Applicants respectfully request reconsideration and withdrawal of the rejections of claims 16-19 which depend from claim 15.

In the rejection, claims 1-7, 16 and 17 were rejected under 35 U.S.C. §103(a) as being obvious over the Palmas patent in view of U.S. Patent 5,376,339 (the "Castagnos patent"). Applicants respectfully traverse this rejection. The rejection contends that the Palmas patent discloses a cyclone having an inlet directly communicating with said outlet of said transport conduit. The cyclone referred to in the rejection is downstream of outlet 31' according to the section of the Palmas patent cited in the rejection. Palmas patent, column 6, lines 37-42. Applicants respectfully submit that cyclones downstream of outlet

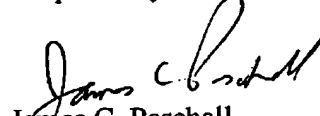
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31 do not directly communicate with the outlet of the transport conduit in the Palmas patent. The outlet 30' of the transport conduit 15' must descend downwardly in the separator 13' and then ascend upwardly through restricted opening 41 of shroud 40 and ascend upwardly and outwardly through outlet 31'. The Palmas patent does not indicate how much farther downstream cyclone separators would be provided from outlet 31' and no reference is cited to show a cyclone separator directly connected to the outlet 31'. Moreover, even if a cyclone were directly connected to outlet 31', which it is not, the indirect path from outlet 30' to outlet 31' in the Palmas patent, Applicants respectfully submit, precludes its interpretation as satisfying a direct communication as recited in claim 1. The specification of the subject application referring to FIG. 5 shows an example of a direct connection which is a conduit directly connecting outlet 46 of transport conduit 22 through a direct conduit 48 into an inlet 49 of cyclone 20. Subject application, paragraph [0028], lines 1-3. Moreover, the Castagnos patent cited as a secondary reference does not teach a cyclone for processing effluent from an outlet 70 from reactor vessel 50. Instead, the cyclone 20 in the Castagnos patent teaches treating feed before it enters the reactor vessel 50 from conduit 15 through conduit 28. Applicants respectfully submit that the outlet from the transport conduit 15' is not in direct communication with a cyclone which is downstream of outlet 31'. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 1 for obviousness. At least for the same reasons, Applicants respectfully request reconsideration and withdrawal of the rejections of claims 2-7 which depend from claim 1 for obviousness.

For the foregoing reasons, Applicants respectfully request reconsideration and allowance of all the claims 1-19 pending in the subject application.

Respectfully submitted,



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